

REMARKS**Status of this application**

This amendment repeats the content of the amendment mailed on December 19, 2002, which was deemed not to comply with 37 C.F.R. 121(c) in the Office communication mailed on February 11, 2004. This amendment sets forth the requested amendments in the form required by current practice. The following remarks, which were submitted with the prior amendment, are repeated below:

Claims 1-72 are pending in this application. In the Office Action mailed on June 19, 2002, claim 55 was allowed and claim 46 was indicated to be allowable if written in independent form. The remaining claims were rejected for the reasons summarized in the table below:

Claims	Rejection	Cited Art
21,27,40,49-50,59	Indefiniteness	
1, 41, 49	Double Patenting	In view of claim 22 of 5,892,536
1-3, 5-7, 22-23, 49	102(b)	Von Kohorn 4,605,973
62	102(b)	Legall et al. 6,005,565
4	103(a)	Von Kohorn 4,605,973 and Aras et al 5,872,588
8-13, 41-45, 47-48, 50-54, 69-70, 72	103(a)	Von Kohorn 4,605,973 and Chard 4,605,964
24-26, 28-30, 56-61	103(a)	Von Kohorn 4,605,973 and Stautner et al. 6,172,677
14-15	103(a)	Von Kohorn 4,605,973; Chard 4,605,964 and Woo 5,485,219
16-21, 71	103(a)	Von Kohorn 4,605,973 and Lewine 5,668,917
31-39, 63-67	103(a)	Von Kohorn 4,605,973 and Legall et al. 6,005,065
68	103(a)	Von Kohorn 4,605,973; Legall et al. 6,005,065 and Schindler 6,081,830
40	103(a)	Von Kohorn 4,605,973 and "Official Notice"

46	None	Allowable if rewritten in independent form
55	None	Allowed

Claims 2, 27, 42, 49, 51-54, 57-60, 62, and 69-72 have been cancelled by this response. Numerous claims have been amended, and several typographical errors have been corrected in the specification by this amendment.

In addition, the drawings were objected to for not including labels in certain blocks, and for the use of reference numerals that do not correspond to the written description. These objections are believed to be corrected in the corrected formal drawings which were submitted in a separate communication to the Office Draftsperson mailed on December 19, 2002.

The Examiner's Conclusions Regarding Priority

On page 2 of the Action, the Examiner further concluded that claims 1 and 2 are disclosed in and are entitled to the benefit of the filing date of the parent application Serial No. 09/892,948 (now Patent 5,892,536), but that claims 3-72 relate to subject matter that is newly disclosed in this application. It should be understood that applicants do not concede that claims 1 and 2 are the only pending claims which are entitled to the benefit of the filing date of the parent application. Applicants reserve the right to rely upon that earlier filing date with respect to any claim that is supported by the disclosure of the parent case should such claim be rejected in view of a reference having an effective date after the filing of the parent case.

Response to Rejections

The discussion which follows addresses the Examiner's rejections in the same order as those rejections are presented in the outstanding Office Action. For convenience, the section number under which the rejection appears in the Action is noted in the heading of each corresponding section of the response below.

6-7. The Indefiniteness Rejection

Claims 21, 27, 40, 49-50 and 59 were rejected as being indefinite.

Claims 21 and 40 were rejected as using a term "stored broadcast programming signal" which lacked a proper antecedent. Parent claim 1 has been amended to recite the correct

antecedent, and claims 2, 30, 36-37 and 39-49 have also been amended to refer to the "stored broadcast programming signal" as now recited in claim 1 as amended.

Claim 27, which was rejected for indefiniteness, has been cancelled.

Claim 49 has cancelled by this response.

Claim 50 has been amended to be made dependent on claim 1 and has been amended to provide proper antecedents.

Claim 59 has been amended to correct the antecedent problem by referring to the "priority signal" instead of the "topic data signal."

These amendments are believed to correct the points of indefiniteness objected to by the Examiner.

9. The Double Patenting Rejection

Claims 1, 41 and 49 were rejected for obvious-type double patenting as not being patentably distinct from, or being obvious in view of, the subject matter set forth in claim 22 of U.S. Patent 5,892,536 (the parent of the present application). Reconsideration of this rejection is rejected in view of the amendments to claims 1 and 41 and the cancellation of claim 49. Each of these claims now recites, *inter alia*, a buffer comprising a random access memory for persistently storing a representation the broadcast programming signal. As amended, claims 1 and 41 are believed to be both patentably distinct from and not obvious in view of the subject matter set forth in the cited issued patent claim.

11. Claims 1-3, 5-7, 22-23 and 49 Rejected under §102(b) in view of Von Kohorn 4,605,973

Claim 1 has been amended by this response to more particularly point out and distinctly claim the invention. In addition, dependent claim 2 has been cancelled by this response since its limitations have been incorporated into claim 1 as amended, and claims 3, 5, 8, 12, 13, 15, 16, 19, 20, 31, 33-37 and 39-40 have been amended to reflect new antecedents in the amended claim 1. As noted earlier, claims 27 and 49 which were objected to for indefiniteness have been cancelled.

As seen in the table above, the Von Kohorn patent is the principal reference relied upon by the Examiner and is cited against all claims (except claim 62 which was rejected on Legall et

al. and claims 46 and 55 which are indicated to be allowable as filed). The Examiner contends that the Von Kohorn patent fully discloses the subject matter set forth in independent claim 1 and its dependent claims 2-3, 5-7, 22-23, as well as independent claim 49. These "anticipation" rejections are discussed below, and the rejections under §103 based on the Von Kohorn patent when combined with additional references are treated in subsequent sections.

Von Kohorn discloses an arrangement for inhibiting the viewing or recording of selected segments of a broadcast TV or radio program. Von Kohorn's system as described may be used to block the viewing or recording of segments containing "mature" material unsuitable for minors, or prevent the recording of the intermission between the acts of an opera or the half-time portion of a football game. A human editor at a central station monitors a live broadcast and sends command signals to a remote TV or radio receiver operated by a subscriber. Because the broadcast programming must be evaluated by the human editor before the command signals can be sent, the broadcast signal received by the subscriber is delayed until the command signals arrive so that unwanted program segments may be blocked before viewing or recording takes place. The Von Kohorn patent discloses a delay unit 35 at the subscriber location, seen in Fig.4, that consists of a moving magnetic medium belt 148 onto which the received signal is written by a recording head 152 and then read after a delay interval by a playback head 154. The delay unit stores the broadcast signal for 5-15 seconds (col. 11, line 52). Von Kohorn notes that other types of delay devices may be used, including a electronic circuitry for digitizing the television signals and a random-access memory for storage of the digital signals during the delay interval (col. 11, lines 54-57).

Unlike Von Kohorn's system, applicants disclose an arrangement in which the marking signals transmitted to a subscriber represent locations in the compressed programming signal persistently stored in a random access buffer memory. Each marking signal includes information specifying the location of a corresponding program segment in the persistently stored broadcast programming signal. For example, the editing station can generate a marking signal that represents a location in the content stream that denotes the beginning of a new news item in a news broadcast. The marking signal could also include text describing the content of the news segment to follow. The viewer of video monitor can use an input device to issue an instructions select a particular marking signal to jump the particular location in the persistently stored broadcast content in the buffer memory that is specified by the selected marking signal.

Von Kohorn does not suggest any arrangement for persistently storing broadcast programming or for controlling the playback by jumping to a particular stored segment of broadcast programming. Von Kohorn's delay unit merely delays but does not persistently store the received programming, and Von Kohorn does not suggest any mechanism for jumping to and presenting selected segments which are stored in a random access memory buffer as disclosed and claimed by applicant.

Independent claim 1 as amended, and its dependent claims 2-3, 5-7 and 22-23, sets forth a random access buffer memory coupled to the receiver for persistently storing a representation of said broadcast programming signal as a stored broadcast programming signal. Von Kohorn's "delay unit" does not persistently store the received broadcast signal and only provides one function: to delay the broadcast signal briefly to provide sufficient time to receive a delayed signal from a central station that inhibits the viewing or recording of unwanted material.

Independent claim 1 as amended further sets forth an input device operable by an individual for generating an instruction for selecting a specified one of the received marking signals, and a processor coupled to input device and said random access buffer memory for selectively jumping to and delivering to a monitor that program segment within said stored broadcast programming in the random access buffer memory that corresponds to the specified marking signals. Von Kohorn neither suggests nor discloses such an arrangement.

Reconsideration of the rejection of claim 1 and its dependent claims 3, 5-7 and 22-23 in view of Von Kohorn is accordingly requested for the reasons given above. Independent claim 49, which was similar in scope to claim 1 as filed, has been cancelled by this response in favor of the protection afforded by rewritten claim 1.

12. Claim 62 Rejected under §102(b) in view of Legall et al. 6,005,565

Claim 62 has been cancelled by this response.

The Section 103 Rejections

The Examiner has rejected 60 of the 72 originally submitted claims on the basis that it would have been obvious to obvious to modify the teaching of Von Kohorn by incorporating features shown in one or more of seven secondary references. The Examiner addressed each of

these secondary references, or combinations of references, in separate sections which are separately discussed below.

With respect to the rejection of claims 4, 8-21, 24-26, and 28-39, all of which are dependent on claim 1 as amended; it is submitted that the subject matter set forth in amended claim 1 is not suggested by any of the cited art, whether that art be considered singly or in combination, and that the subject matter set forth in claim 1 and all of its dependent claims would accordingly not have been obvious to one of ordinary skill. Von Kohorn does not disclose or suggest the subject matter set forth in independent claim 1, and none of the prior art references disclose such an arrangement. Accordingly, reconsideration of the obviousness rejection of the claims that are dependent upon claim 1 is requested since the limitations expressed in claim 1, as amended, by itself represent invention over the art of record. However, in the following sections, additional distinctions over the art of record set forth in the dependent claims are also presented.

**14. Claim 4 Rejected under §103(a) in view of
Von Kohorn 4,605,973 and Aras et al. 5,872,588**

Claim 4 as amended states that the receiver comprises two or more tuners for receiving and storing multiple broadcast programming signals in said buffer simultaneously. The Aras et al. patent discloses the use of multiple tuners in a single receiver for implementing a PIP (picture-in-picture) display of simultaneously received TV channels, but does not suggest plural tuners for simultaneously storing multiple broadcast signals in a random access buffer memory as now set forth in claim 4 as amended.

**15. Claims 8-13, 41-45, 47-48, 50-54, 69-70 and 72 Rejected under
§103(a) in view of Von Kohorn 4,605,973 and Chard 4,605,973**

Chard 4,605,964 discloses a method for inhibiting the display or recording of undesirable segments of a TV program. At the transmitter, a human editor identifies objectionable material and enters a command code which is inserted into a delayed version of the program, the command codes being transmitted with the broadcast signal in the vertical blanking interval (as teletext codes). Neither Chard nor Von Kohorn suggest persistently storing the programming

signal in a random access memory and then jumping to the desired segment of that program as specified by a marking signal as set forth in independent claim 1.

Claims 8-15 have been amended by this response to recite that the editing unit includes a time reference signal generator for generating a time stamp signal that is included in the information transmitted with as a marking signal to specify the start time of one of said program segments. Neither Von Kohorn nor Chard disclose the transmission of a time stamp signal. Although, as the Examiner has noted, col. 1, lines 54-56 of Chard that a time of occurrence is determined from the transmitted code, col. 1, lines 41-43 make it clear that the coding is inserted into the broadcast signal when events occur to identify those events. Accordingly, a time stamp signal from a time reference signal generator is not included in the Chard's coding. Instead, Chard's coding indicates the "sound or visual nature" of each event. Reconsideration of the rejection of claims 8-13 as being obvious in view of Chard is accordingly requested.

Claims 41-48 were rejected based on Von Kohorn in view of Chard. Independent claim 41 has been amended by this response to incorporate the limitations of claim 42 and sets forth the use of a blocking signal that is included in the marking signal representing information for preventing the deletion of a specified segment of said stored broadcast programming signal. The Examiner has noted, with respect to claim 42 as submitted, that Von Kohorn, at col. 8, lines 61-68, teaches the command codes may be encoded so that only paying subscribers can use the service, and that the encoding can thus be regarded as information that prevents the deletion of segments. Reconsideration is requested. Independent claim 41 as amended makes it clear that the blocking signal represent information that prevents the deletion of specified segments of the stored broadcast programming signal. As discussed previously in connection with claim 1, Von Kohorn does not disclose the persistent storage of broadcast programming signals which are then modified in accordance with marking signals. Moreover, Von Kohorn does not disclose including a blocking signal in the marking signal which prevents the deletion of specified segments of the stored programming. Instead, Von Kohorn's encoding mechanism prevents his encoded command signals from being used to delete any segments of incoming live programming.

Claims 42 has been cancelled since its limitations were incorporated into claim 41. Claims 43-48 are dependent on claim 41 and are believed allowable for the reasons presented above. Claim 49, which was also rejected for indefiniteness, has been cancelled as noted earlier.

Claims 51 - 54 were rejected on the same grounds as claims 42-45 respectively, and have been cancelled by this response in favor of the protection afforded by claims 42-45 respectively in order to expedite the prosecution of this application.

Claims 69 , 70 and 72 were rejected on the same basis advanced for claims 9, 10 and 12 and have been cancelled by this response in favor of the protection afforded by those claims 8-12 as amended.

**16. Claims 24-26, 28-30 and 56-61 Rejected under §103(a)
in view of Von Kohorn 4,605,973 and Stautner et al. 6,172,677**

Stautner et al. describe an interactive multimedia electronic program guide (EPG) displayed on a personal computer screen using a program guide database stored on a local hard disk. The data for the program guide is obtained from any suitable source, such as data transmissions using the vertical blanking interval of broadcast TV signals. The cells in the displayed guide may include "hyperlinks" to detailed information about the show from the database, URLs to related online information, advertising, interactive chat rooms on related topics, online shopping for related products, etc. As noted by the Examiner, Stautner et al. further describe, at col. 7, lines 56 et seq., the creation of a log file that stores information that records a given user's pattern of use to identify live programming a user might wish to view, presenting an option to the user to tune to that channel immediately before a preferred program is broadcast.

Claims 24-26 and 28-30 are dependent upon independent claim 1 which has been amended to more clearly distinguish over the teachings of Von Kohorn and it is submitted that these dependent claims are patentable for the reasons advanced earlier with respect to claim 1. The Stautner et al. patent, like the Von Kohorn patent, does not disclose or suggest using a random access buffer memory coupled to the receiver for persistently storing a representation of said broadcast programming signal as a stored broadcast programming signal, and does not describe any mechanism for selectively jumping to and delivering to a monitor that program segment within said stored broadcast programming in the random access buffer memory that corresponds to specified marking signals. While Stautner et al. disclose the creation of a viewing log reflecting user preferences, it does not disclose the use of a usage log in combination

with the arrangement set forth in claim 1. Reconsideration the rejection of dependent claims 24-26 and 28-30 is accordingly requested.

Claims 56-61 were also rejected based on the proposed modification of the Von Kohorn teaching in view of the Stautner et al. patent.

Claim 56 has been amended to more clearly set forth an arrangement in which the viewing log is created at the remote location where a first programming signals are viewed, the viewing log is then transmitted to an editing station and which then generates a second markup signal which is transmitted to the remote location to control the viewing of a second broadcast signal. In the Stautner et al. reference, there is no suggestion that the viewing log transmitted to a remote editing station where it is used to create a markup signal that is then returned to the viewing location. Reconsideration of claim 56 as amended is requested.

Claims 57-60 have been cancelled have been cancelled to expedite prosecution in favor of the protection afforded claims 24-26, 28-30 and 56, reconsideration of which is requested in view of the forgoing remarks.

17. Claims 14-15 Rejected under §103(a) in view of Von Kohorn 4,605,973, Chard 4,605,973 and Woo 5,485,219

Claims 14 and 15 were rejected in view of the three references noted in the caption for the reasons advanced for the rejection of claim 13. Claims 14 and 15 have been amended to instead depend upon claim 8, and are now believed to be allowable for the reasons advanced above with respect to amended claim 8 and independent claim 1, claim 8's parent claim. Claim 15 has also been amended to more clearly set forth the subject matter claimed.

The cited Woo patent discloses an arrangement for transmitting program schedule and control information for automatically recording broadcast signal without recording commercials. As noted by the Examiner, the schedule and control information includes time and channel information. Woo does not, however, disclose the transmission of markup signals which control the playback of program information stored in a random access, selectively jumping to stored program segments in response to markup signals. Nothing in Woo suggests the combination set forth in independent claim 1, and nothing in Woo suggests that the Von Kohorn or Chard references be modified to provide the invention of independent claim 1 as amended, let alone dependent claims 14 and 15. Reconsideration of claims 14-15 is requested.

18. Claims 16-21 and 71 Rejected under §103(a) in view of Von Kohorn 4,605,973 and Lewine 5,668,917

Claims 16-21 are dependent on claim 1 as amended and are believed to be allowable for the reasons presented above with respect to claim 1. Nothing disclosed or suggested in the Lewine patent provides a teaching of the claimed subject matter not found in the Von Kohorn patent. Lewine does teach an arrangement for detecting repeating frames of broadcast programming in order to eliminate repetitive programming. Lewine does not suggest or disclose that frame information may be used as a location identifying information in an arrangement as set forth in claim 1. Reconsideration is requested.

Claim 71 has been cancelled to expedite the prosecution in favor of the protection afforded by claims 16-21.

19. Claims 31-39 and 63-67 Rejected under §103(a) in view of Von Kohorn 4,605,973 and Legall et al. 6,005,565

Claims 31-39 are dependent on claim 1 as amended and are believed to be patentable for the reasons presented above with respect to claim 1. The Legall et al. patent describes an integrated electronic program guide which is sent to the viewer location in advance of the actual broadcast to assist the user in selecting live programming. Legall et al. do not teach the storage or program signals, and do not suggest the creation of markup signals at a remote location which are transmitted to the viewer location to selectively jump to and play back recorded programming as set forth in independent claim 1. There is nothing in the Legall et al. teaching that would suggest that its electronic program guide could or should be connected to a system of the type disclosed by Von Kohorn for deleting segments of live programming, and even if that combination were made, it would not yield the arrangement set forth in claim 1 as amended, let alone the dependent claims 31-39. Reconsideration is requested.

Claims 63 -67 were rejected for the same reasons advanced with respect to claims 33-39. It is again submitted that there is no disclosure or suggestion in the Legall et al. patent that the integrated electronic program guide could or should be combined with a system in which markup signals are transmitted to modify broadcast programming. Reconsideration of the rejection of claims 63-67 is respectfully requested.

**20. Claim 68 Rejected under §103(a) in view of
Von Kohorn 4,605,973, Legall et al. 6,005,565 and Schindler 6,081,830**

Claim 68, which is dependent on claim 63, was rejected based on the further teaching of Schindler. Schindler discloses an electronic program guide that includes links to program specific chat rooms. There is nothing in Schindler that supplies the deficiencies noted above with respect to claims 63-67. Reconsideration of claim 68 is requested.

**21. Claim 40 Rejected under §103(a) in view of
Von Kohorn 4,605,973 and "Official Notice"**

Claim 40, which is dependent on claim 1 as amended, has been rejected on the basis of Official Notice that it is well known to eliminate duplicative stored signals to conserve memory space. While that is true, it is submitted that it is not well known to eliminate duplicative signals by transmitting a second marking signal that specifies a second program segment that is redundant with a program segment identified by a first marking signal. Reconsideration of claim 40 is requested this reason, as well as for the reasons advanced with respect to amended claim 1.

Conclusion

Allowance of claims as now presented is requested for the reasons stated in the foregoing remarks.

Respectfully submitted,



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